

## REMARKS

In response to the Office action dated June 13, 2007, Applicants respectfully request reconsideration based on the above amendment and the following remarks. Applicants respectfully submit that the claims as presented herein are in condition for allowance.

Claims 1-22 are pending in the present application. Applicants cordially thank the Examiner for the indication that claims 11-22 are in condition for allowance and that claim 8 would be allowable if amended to incorporate all of the limitations of its base claim and any intervening claims.

No claims have been amended. No new matter has been added with respect to this response. Applicants respectfully request reconsideration of claims 1-22 based on the following remarks.

### Claim Rejections Under 35 U.S.C. §103

#### Claims 1-3, 5-7, 9 and 10

Claims 1-3, 5-7, 9 and 10 stand rejected under 35 U.S.C. §103(a) as being allegedly anticipated by Morita et al. (U.S. Patent No. 6,647,133, hereinafter "Morita") in view of Chosi et al. (U.S. Patent Publication No. 2004/0071322, hereinafter "Chosi"). The Examiner states that Morita discloses all of the elements of the abovementioned claims except, *measuring a capacitance between the object and the conductive sensing electrode so as to check whether or not the first recognition signal is obtained from a human being*, which the Examiner further states is disclosed primarily in FIG. 17 and paragraphs 59, 65 and 66 of Chosi.

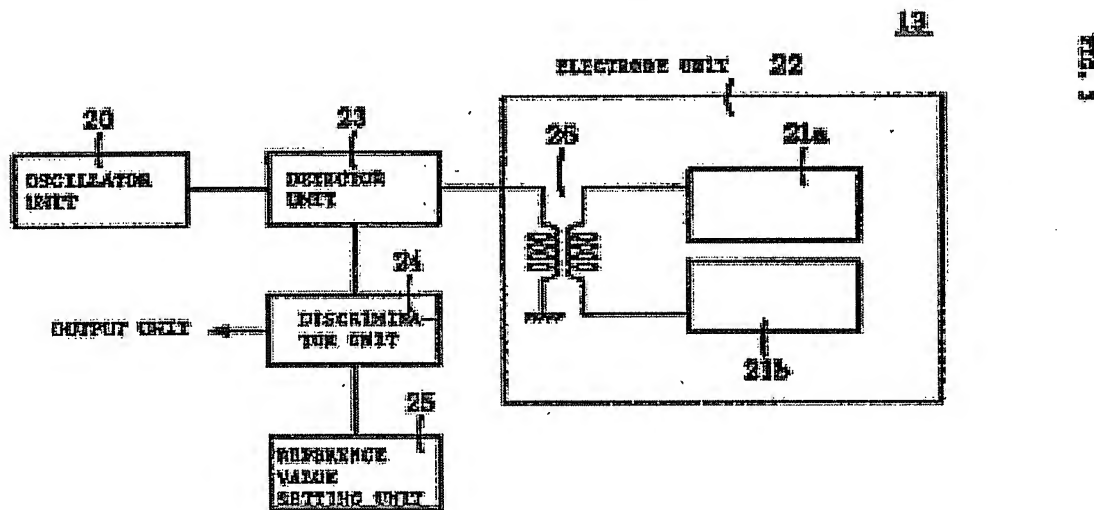
Morita discloses a fingerprint identification device equipped with a touch sensor for detecting a human finger. (See Abstract). Morita discloses a fingerprint identification device 11 including; a prism 15, a light source 16, a lens 17, a fingerprint identification unit 12, a touch sensor 13 and an output unit 14. (See FIG. 2). Morita discloses that the touch sensor 13 includes an electrode unit 22, which further includes a pair of electrodes 21a and 21b. The electrode unit 22 also includes a pair of resistors R2 and R3 and a transformer 26 (see FIGS. 3 and 5 and column 5, lines 3-48). When a finger is not touching the area between electrodes 21a and 21b the secondary side of transformer 26 is in an open state (e.g., the electrodes 21a and 21b are not

connected). When a finger connects the electrodes 21a and 21b the resistance values R2 and R3 of electrodes 21a and 21b, the capacitance values C2 and C3 between electrodes 21a and 21b and the finger, and the capacitance of the finger itself, are serially connected to the secondary coil of the transformer 26. The touch sensor 13 then compares an impedance value of the finger to a reference value. (See column 5, lines 13 through 17). The touch sensor 13 then determines the presence of a finger from the comparison.

Morita does not teach, suggest or disclose: a second recognition section disposed on the transparent substrate adjacent to the first recognition section, the second recognition section having a conductive sensing electrode connected to a switching element, and sensing a biological signal from the object by measuring a capacitance between the object and the conductive sensing electrode as claimed in amended independent claim 1.

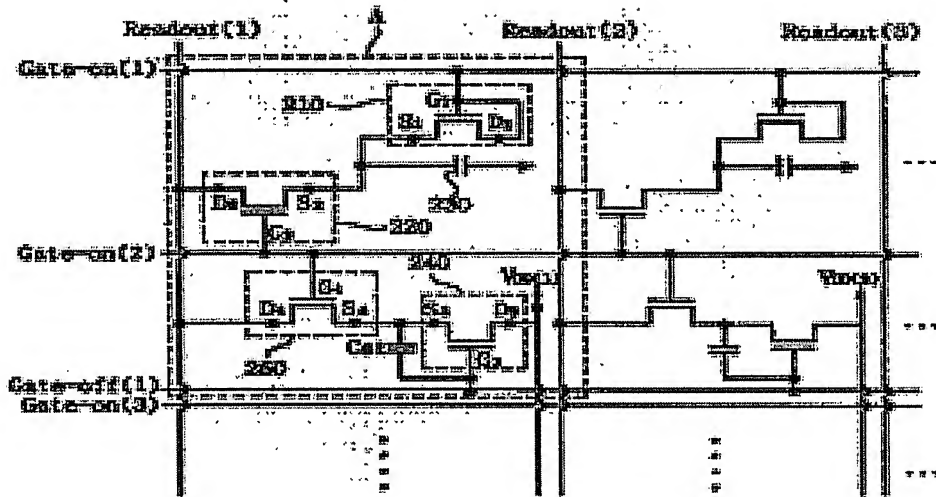
The conductive sensing electrode of Morita is electrically connected to a transformer 26 as shown below.

Morita



However, according to the present invention, a conductive sensing electrode 230 is electrically connected to a switching element as shown below.

Present invention



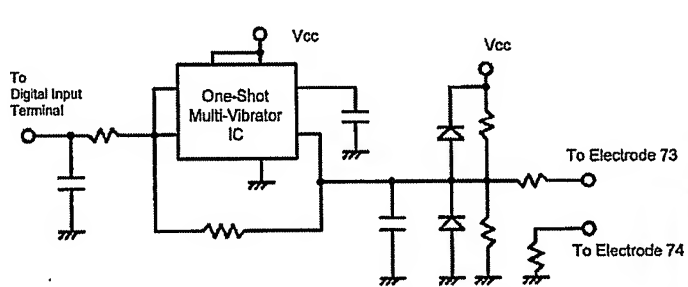
Chosi discloses an organism authenticating apparatus including an authentication unit 71, a control unit 70, a computer 10 and an electronic lock 12. (See Abstract and FIGS. 9-14 and 17). The authentication unit 71 includes a one-chip computer 92, a card reader 77, an infrared LED 97, a temperature detection circuit 96, a resistance detection circuit 94 and a capacitance detection circuit 95. (See FIG. 11 and paragraphs 62-65). The capacitance detection circuit includes two electrodes 73 and 74; the electrode 74 is connected to a ground connection and the electrode 73 is variously connected to a plurality of resistors, diodes, a one-shot multi-vibrator integrated chip ("IC") and a digital input terminal. (See FIG. 14 and paragraph 65). The oscillation frequency of the one-shot multi-vibrator IC varies according to the capacitance and the resistance of the finger connected to the electrodes 73 and 74. The oscillation signal is then sent to the one-chip computer 92 for processing before being sent to a one-chip computer 80 of the control unit, which may then activate the electronic lock 12. (See FIGS. 9, 11 and 14 and paragraph 65).

Chosi does not cure the deficiencies of Morita with respect to claim 1, namely, Chosi does not teach, suggest or disclose: **a second recognition section disposed on the transparent substrate adjacent to the first recognition section, the second recognition section having a conductive sensing electrode connected to a switching element, and sensing a biological**

**signal from the object by measuring a capacitance between the object and the conductive sensing electrode** as claimed in amended independent claim 1.

In Chosi, the biological signal from the object (in this case a finger) is sensed by measuring the capacitance or the resistance between **two electrodes**, electrode 73 and common electrode 74, wherein the two electrodes do not include the object. (See FIG. 14 appended below and paragraph 0065).

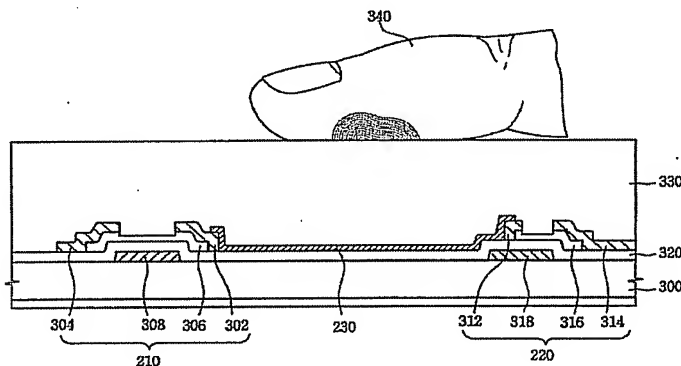
FIG. 14 of Chosi



In Chosi, the variation of the capacitance and the resistance between electrode 73 and the common electrode 74 determines whether the object is an organism or not.

In contrast, in the present invention, a biological signal from the object is sensed by measuring a capacitance between the object (finger; 340) and the conductive sensing electrode (230) so as to check whether or not the first recognition signal is obtained from a human being, as claimed in claim 1, wherein the object itself serves as an electrode. (See FIG. 4 of the present invention appended below).

FIG. 4 of the Present Invention



Thus, claim 1 is believed to be patentably distinct and not anticipated by Morita, Chosi or any combination thereof. Claims 2, 3 and 5-10 depend directly or indirectly from claim 1, and thus include all the limitations of claim 1. It is thus believed that the dependent claims are allowable for at least the reasons given for independent claim 1, which is believed to be allowable.

Accordingly, Applicants respectfully request reconsideration and allowance of claims 1-3, 5-7, 9 and 10.

#### **Claim 4**

Claim 4 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Morita in view of Chosi and further in view of Kamiko (U.S. Patent No. 5,991,467, hereinafter "Kamiko"). The Examiner states that Morita in view of Chosi discloses all of the elements of claim 4 except, *expressly wherein the image recognition sensor comprises: a sensing TFT that outputs a voltage signal corresponding to the reflecting light reflected from the image pattern, a storage capacitor that charges an electron charge corresponding to the voltage signal input from the sensing TFT, and a switching TFT that outputs a voltage signal corresponding to the electron charge charged into the storage capacitor in response to a switching signal applied from an external*, which the Examiner further states is disclosed primarily in FIG. 1, column 4, lines 16-36, 38-63, column 7, lines 36-40, column 8, lines 27-36 and 59-62. Applicants respectfully traverse for at least the reasons set forth below.

As mentioned above, Morita in view of Chosi does not teach, suggest or disclose: **a second recognition section disposed on the transparent substrate adjacent to the first recognition section, the second recognition section having a conductive sensing electrode connected to a switching element, and sensing a biological signal from the object by measuring a capacitance between the object and the conductive sensing electrode** as claimed in amended independent claim 1.

Kamiko discloses an image reading apparatus containing light receiving transistors and switching transistors. (See Abstract).

Kamiko, however, fails to cure the deficiencies of Morita in view of Chosi, namely Kamiko does not teach, suggest or disclose: **a second recognition section disposed on the transparent substrate adjacent to the first recognition section, the second recognition**

**section having a conductive sensing electrode connected to a switching element, and sensing a biological signal from the object by measuring a capacitance between the object and the conductive sensing electrode** as claimed in amended independent claim 1.

Thus, Applicants submit that Morita, Chosi and Kamiko, alone or in combination, do not render obvious the subject matter of claim 1. Claim 4 depends from claim 1, and thus includes the allowable elements of claim 1. It is thus believed that the dependent claims are patentable over the cited references for at least the reasons given above for independent claim 1.

Accordingly, it is respectfully submitted that the claimed invention is allowable over the cited references. The Examiner's reconsideration and withdrawal of the rejection of claim 4, and the subsequent allowance of claim 4, is respectfully requested.

**Conclusion**

In view of the foregoing remarks distinguishing the prior art of record, Applicants submit that this application is in condition for allowance. Early notification to this effect is requested.

The Examiner is invited to contact Applicants' Attorneys at the below-listed telephone number regarding this Amendment or otherwise regarding the present application in order to address any questions or remaining issues concerning the same.

If there are any charges due in connection with this response, please charge them to Deposit Account 06-1130.

Respectfully submitted,

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